

NATURAL RESOURCES CONSERVATION SERVICE

RESIDUE MANAGEMENT, SEASONAL

(Acre)

CODE 344

DEFINITION

Managing the amount, orientation, and distribution of crop and other plant residues on the soil surface during part of the year, while growing crops in a clean tilled seedbed.

PURPOSES

This practice may be applied as part of a conservation management system to support one or more of the following:

1. Reduce sheet and rill erosion.
2. Reduce soil erosion from wind and air soil particulates.
3. Provide food and escape cover for wildlife.

CONDITIONS WHERE PRACTICE APPLIES

1. This practice applies to all cropland and other land where crops are grown.
2. This standard includes residue management methods practiced during the part of the year from harvest until residue is buried by tillage for seedbed preparation.

CRITERIA

General Criteria Applicable to All Purposes Named Above:

1. Loose residue to be retained on the field shall be uniformly distributed on the soil surface.
2. Where combines or similar machines are used for harvesting, they shall be equipped with spreaders capable of redistributing residues over at least 80 percent of the working width of the header.
3. Residues shall not be burned.

Additional Criteria to Reduce Sheet and Rill Erosion

1. The amount of residue needed to reduce erosion within the soil loss tolerance (T) or any other planned soil loss objective, shall be determined using current approved erosion prediction technology. Partial removal of residue by means such as baling or grazing, shall be limited to retain the amount needed. The remaining residue shall be maintained on the surface through periods when sheet and rill erosion has the potential to occur, or until planting, whichever occurs first. Calculations shall account for the effects of other practices in the conservation management system.
2. Any tillage that occurs during the management period shall be limited to methods which leave residue on the surface and maintain the planned cover conditions.

Additional Criteria to Reduce Soil Erosion from Wind and Soil Air Particulates

1. The amount of residue needed to reduce erosion within the soil loss tolerance (T) or any other planned soil loss objective, shall be determined using current approved wind erosion prediction technology. The minimum amount of residue to be maintained shall be 20% surface cover during the planned period of time or prior to seedbed preparation, as measured using the line transect method. Partial removal of residue by means such as baling or grazing shall be limited to retain the amount needed. The remaining residue shall be maintained on the surface through periods when soil erosion by wind has the potential to occur, or until planting, whichever occurs first. Calculations shall account for the effects of other practices in the conservation management system.
2. Any tillage that occurs during the management period shall be limited to methods, which leave residue on the surface and maintain the planned cover conditions.

Additional Criteria to Provide Food and Escape Cover for Wildlife

1. The amount of residue, height of the stubble, and length of the management period necessary for meeting habitat requirements for the target species or wildlife population shall be determined using the Ohio Habitat Inventory Worksheet.
2. Residues shall not be removed unless it is determined by the habitat evaluation procedure that such removal will not adversely affect habitat values.
3. Tillage shall be delayed until the end of the management period to maintain the food and cover value of the residue.

CONSIDERATIONS

1. Excess removal of plant residue by baling or grazing often produces negative impacts on resources. These activities should not be performed without full evaluation of impacts on soil, water, animal, plant, and air resources.
2. Production of adequate amounts of crop residue necessary for the proper functioning of this practice can be enhanced by selection of high residue producing crops and crop varieties, by the use of cover crops, and by adjustment of plant populations and row spacing.
3. When planting on a clean seedbed, exposure to erosion can be minimized by completing tillage and planting in a single operation, or by performing primary tillage and more than three days before planting.
4. When planting on a clean seedbed in areas with limited moisture, moisture for germination can be increased by completing tillage and planting in a single operation, or by performing primary tillage no more than three days before planting.
5. The effectiveness of stubble to trap snow increases with stubble height. Variable height stubble patterns may be created to further increase snow storage.
6. Leaving rows of unharvested crop standing at intervals across the field can enhance the value of residue for wildlife habitat.

PLANS AND SPECIFICATIONS

1. Specifications for establishment and operation of this practice shall be prepared for each field or treatment unit according to the Criteria, Considerations, and O&M described in this standard. The minimum documentation for this practice is outlined on the last page of this standard.
2. Specifications shall be recorded using approved job sheet 344, narrative statements in the conservation plan, or other acceptable methods.

OPERATIONS AND MAINTENANCE

Evaluate crop and residue management and compare against the residue planning goals and purposes. If the residue amount is not within the target range make adjustments to the crop or residue management strategies.

REFERENCES

National Standard Residue Management, Seasonal (344), June 1994
Jobsheet 344, June 2002

Practice Documentation For:	<i>Residue Management, Seasonal - 344</i>
The following documentation must be in the case folder or engineering subfolder.	
Practice Planning	
1. Is the practice part of a conservation plan? 2. Have the purpose(s) for the practice been identified? 3. Is the location of the practice identified on a map or plan drawing?	
Practice Design	
Have the following design criteria been addressed? 1. The type, amount, and time residue will be managed. 2. Acres planned.	
Practice Installation / Application	
Does the practice meet the minimum criteria for the planned purpose(s)?	
Have the following criteria been documented in the assistance notes or practice jobsheet? 1. The type, amount, and time residue will be managed. 2. Acres applied.	
Practice Deficiencies	
If applicable, have the practice deficiencies been communicated with the decisionmaker?	
Practice Maintenance	
Have the following maintenance actions been communicated to the decisionmaker? 1. Evaluate crop and residue management and compare against the residue planning goals and purposes. If the residue amount is not within the target range make adjustments to the crop or residue management strategies.	
Other Comments:	